

Achieve  
the  
Mission

Right-  
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Inventor  
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# Enterprise AIRSpeed

**CDR John Kemna,**  
AIMD Oceana  
brief to:

**Aviation Maintenance Safety  
Conference**

April 28,  
2005

## Outline

- What is Enterprise AIRSpeed
- The Implementation Process
- Lessons Learned
- Successes

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- CNO has directed a new Fleet Response Plan (FRP) to support fleet operations in the Global War on Terrorism
- Naval Aviation will have to support current levels of readiness despite a budget shortfall
- Requirements growth in the FHP
- Navy and Marine Corps unit commanders will fight in a cost-wise

July 2003

Cost-Wise Readiness Became the Focus

- Many local process improvement initiatives are on-going
  - NAVRIIP TMS Team BRTs
  - PMB, AFMB, CPMB
  - Lean, Six Sigma, TOC
- Efforts are not aligned and often compete
  - Operating in Stovepipes
  - Narrowly focused efforts
  - Local decisions are not globally aligned, with interdependencies having unintended consequences

**TYCOMs, NAVAIR, ICP, USMC & OPNAV have aligned and are focused on attaining cost-wise readiness through an enterprise-wide solution**



**AIRSpeed provides the tools to  
achieve Cost-Wise Readiness across  
the Naval Aviation Enterprise.**

To enable effective and efficient preparation of Cost-Wise Ready for Tasking (RFT) aircraft in support of FRP.

- **Enable** - using AIRSpeed tools in order to be....
- **Effective** - at meeting RFT rating requirements
- **Efficient** - at iteratively reducing costs
- **Preparation** - repair & replenishment of equipment

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- **Enterprise Approach**
  - Creates a continuous process improvement environment
  - Aligns and optimizes Maintenance and Supply activities to end-user demand (Operations)
  - Leverages existing initiatives
  - **Utilizes TRR to size & position inventories**
- **Cultural Change**
  - Synergizes a set of industry tools
  - Eliminates sub-optimization
  - Local decisions made with Global impact known
- **Creates a “pull” system**

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- Properly Manage RFT (mission)
- Manage and Reduce
  - Inventory/Investment
    - parts, equipment and facilities, APN
  - Reduce Operating Expenses
    - O&M, N, MPN
  - Variability
- Identify and manage constraints
- Identify and address interdependencies
- Create a Culture of Continuous Process Improvement (CPI)

*“Local decisions must be aligned to the global imp*

# The Scope of Enterprise

## AIRSpeed



NAVSUP/ICP



Off Aircraft

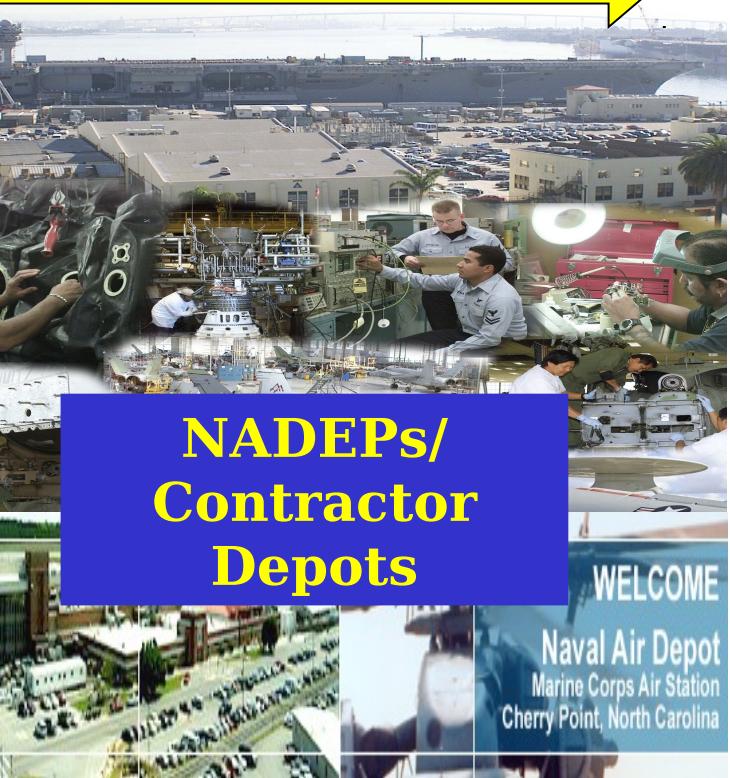
On Aircraft



Retail

Wholesale

DISTRIBUTION DEPOTS



Manage  
*Interdependencies & Variability* Throughout  
The  
Entire System

NRFI  
RFI

NRFI  
RFI

# Enterprise AIRSpeed

## Current Tools

- **Theory of Constraints (TOC)** is based on the belief that any organization has at least one constraint and that any improvements on non-constraints may not yield as significant ROI as working on the constraint.
- **Lean** focuses on the removal of waste-defined as anything not necessary (no value added) to produce the product or service.
- **Six Sigma** is based on the assumption that the outcome of the entire process will be improved by reducing the variation of multiple elements.
- **AFAST** is a Cost Analysis tool used to understand Consumption Variances and Production Cycles

# Three Phases of Enterprise AIRSpeed

- **Design**

- 14-18 Weeks per site
- Baseline the “As-Is” state
- Design the “To-Be” state

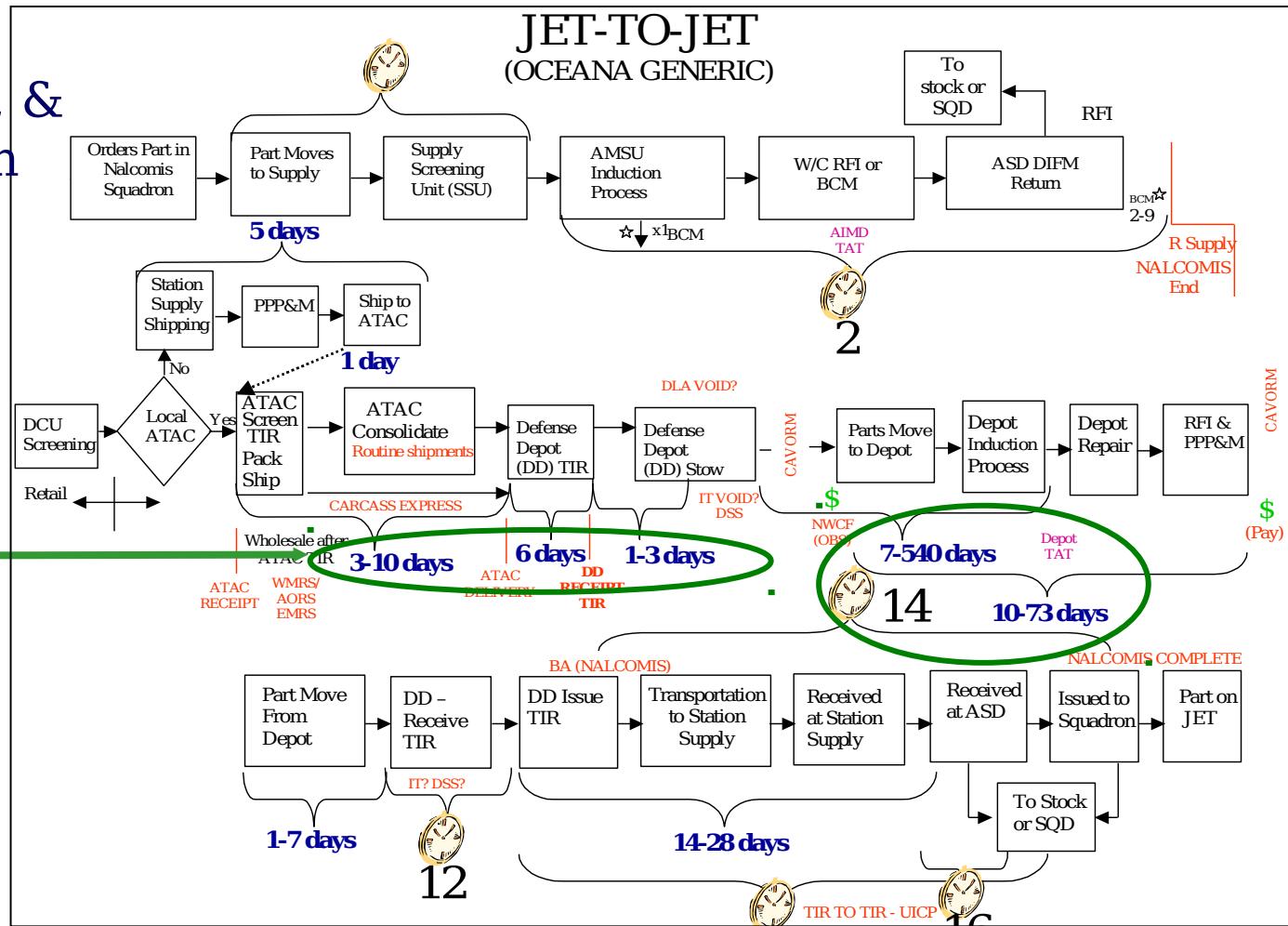
- **Deployment**

- Put in place resources to support “to-be”
- Go live with the “to-be” state
- 12-18 Months to encompass the entire activity

- **Sustainment (on-going)**

- Establish a Center of Excellence
- Incorporate “AIRSpeed” into Policy
  - **NAMP, P485, OPNAV5442**
  - AIRSpeed Office at every activity
- Schoolhouse & Online Training
  - “A” & “C” Schools
  - JASMMM, AMO, SEAMM, PCO, PXO, etc
  - NKO

- Separate Maint, Supply, & Transportation Systems
- Paying a premium for transport then ‘warehousing’
- IT Systems did not facilitate integration



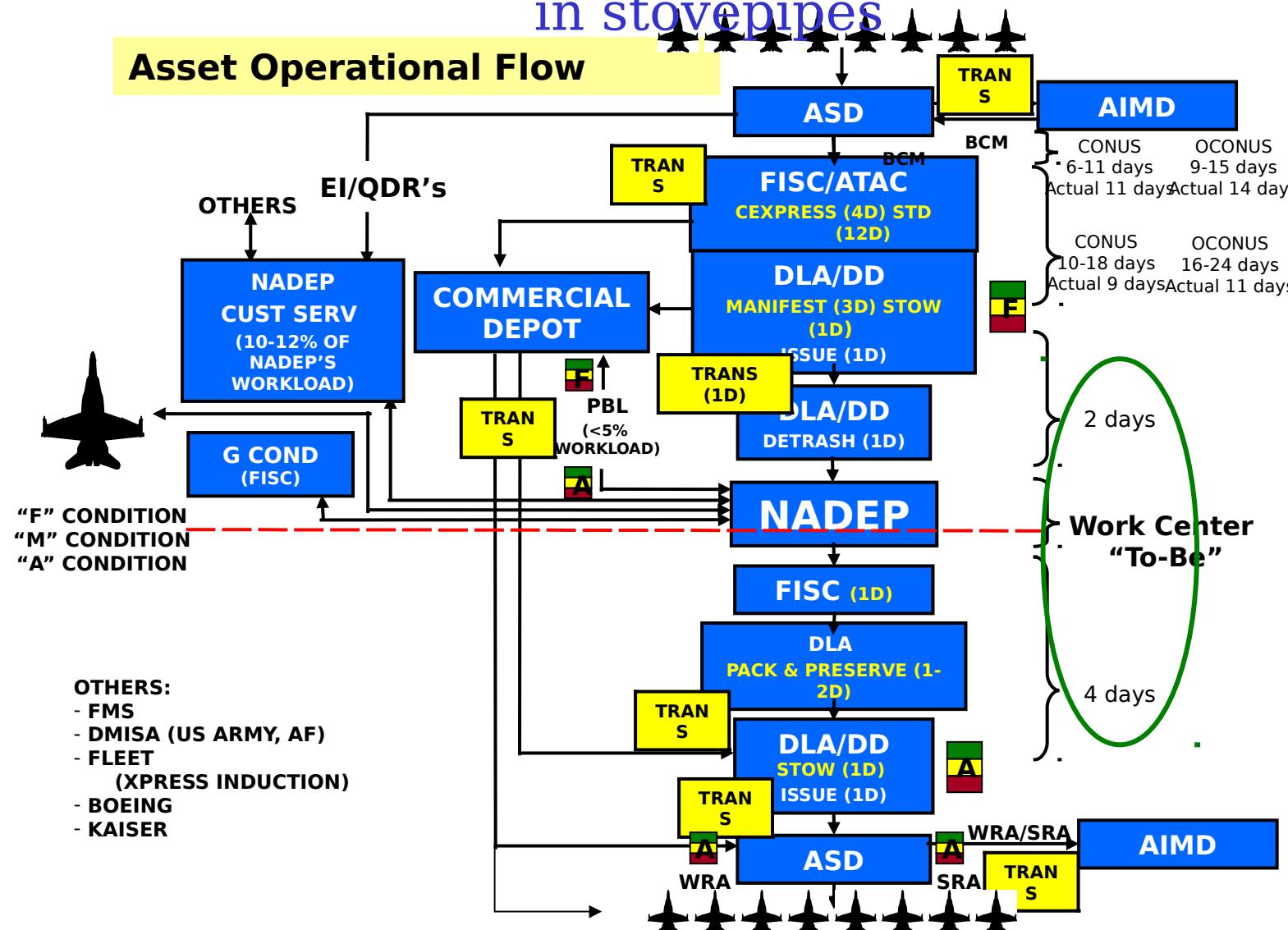
Variability & lack of understanding interdependencies make this system virtually unmanageable.

## Entire system addressed, not managed

# Achieve the Mission

# Right-Size Inventor

# Optimize Operatin g Expense s



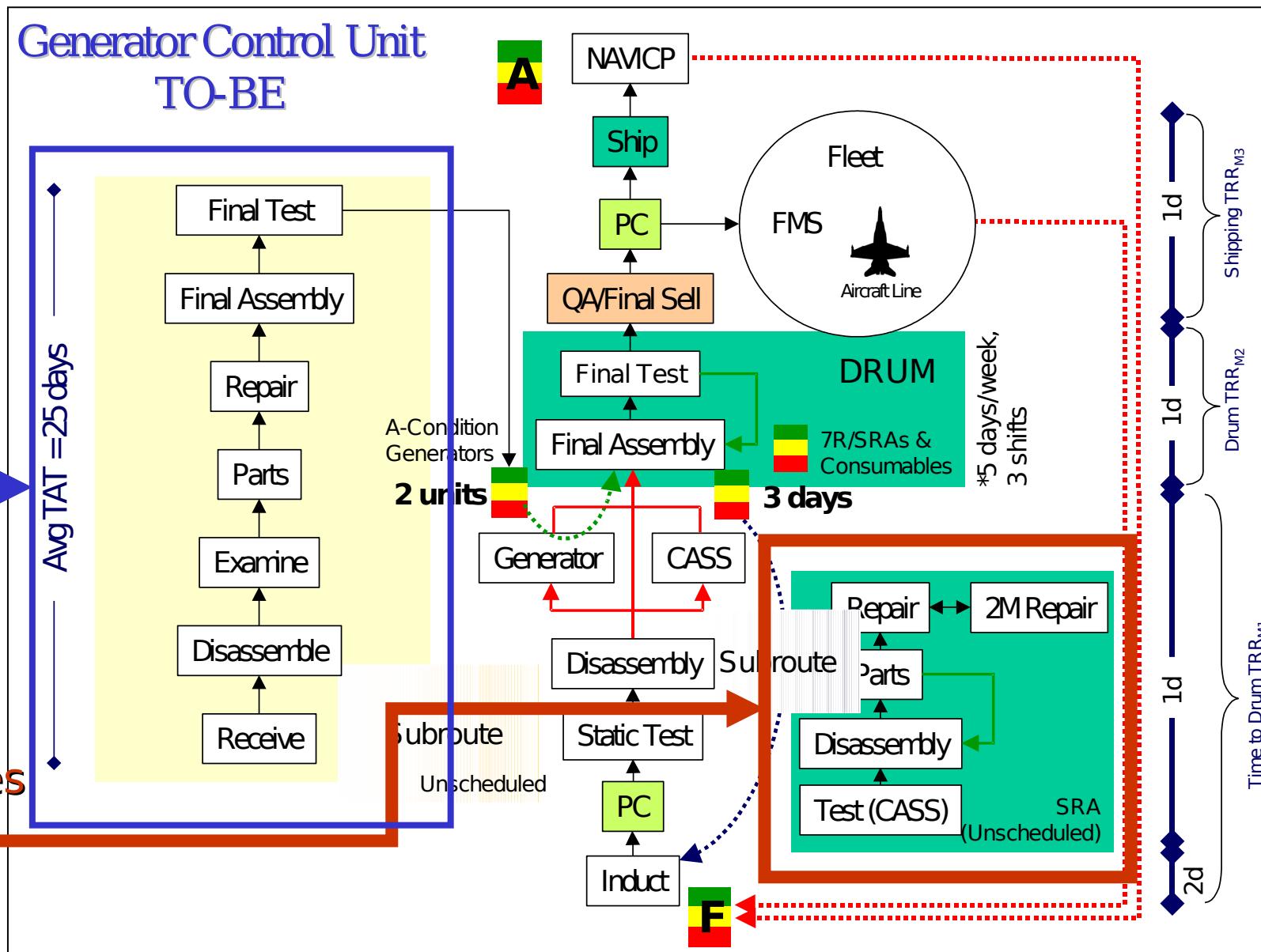
# Enterprise AIRSpeed

# An Integrated Approach

# TOC Design

# Identifies LEAN events

# and 6 Sigma opportunities



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- Support Fleet Readiness Plan
  - Provide Ready for Tasking Aircraft
    - Per CFT 1 Entitlements
- Reduce Total Cost of Naval Aviation
  - Reduce Inventory, Operating Expenses, and Manpower
- Integrated Maintenance & Supply Support System
  - Seamless support to the Fleet
- Improve Logistics/Maintenance Response
  - Decrease Cycle Time
  - Decrease Logistics Footprint
- Place Ownership and Accountability at the appropriate Levels

***These are the consequences of doing AIRSpeed right.***

## Trends of Success

- **Turn Around Time Reductions:**
  - In all cases to date, turn around time has reduced by at least 40%.
- **Manpower Reductions:**
  - In almost all events, at least one billet can be removed from the process.
- **Work in Progress (WIP):**
  - On average, WIP is reduced nearly 50% in areas that have implemented AIRSpeed principles.
- **I to D Level Integration**
- **Daily operating expenses** are decreasing at each activity
- **Inventory levels** are expected to decrease significantly\*

\*Once the TMS system is designed, inventory levels will be adjusted.

# Lessons Learned

- Select the best... dedicate them full-time
- Engage and train leaders & influencers first
- Don't work from the bottom up
- Include customers and suppliers
- Begin with the end in mind
- Remain flexible in your approach
- Visibly celebrate accomplishment

***Leadership Must Be Visibly Committed & Engaged***

# *Success Stories*

# Samples of Successes

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Size  
Inventory**

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Operating  
Expenses**

Site	Objective	Results
AIMD/AS D Lemoore, CA	Reduce Engine TAT	from 83 days to 12 days
	Reduce PRC/URT repair time	from 90 mins to 30 mins
	Decrease TAT of the Radar Shop	from 14 days to 2 days
	Reduce Training and Licensing process for SE	from over 2 hours to less than 15 minutes
AIMD/AS D North Island, CA	Reduce daily activity repair costs by only repairing demand-based components	Reduced daily AVDLR repair costs by \$50,000
	Reduce the cycle time it takes to process a part through the life preserver workcenter	Reduced cycle time from 39 hours to 16 hours
	Reduce expeditious repairs (EXREPS)	Reduced EXREPs by 83%
	Reduce non-moving inventory levels	Reduced 300 AVDLR line items from inventory
	Reduce AFM expenditures	Reduced daily AFM costs by \$28,000

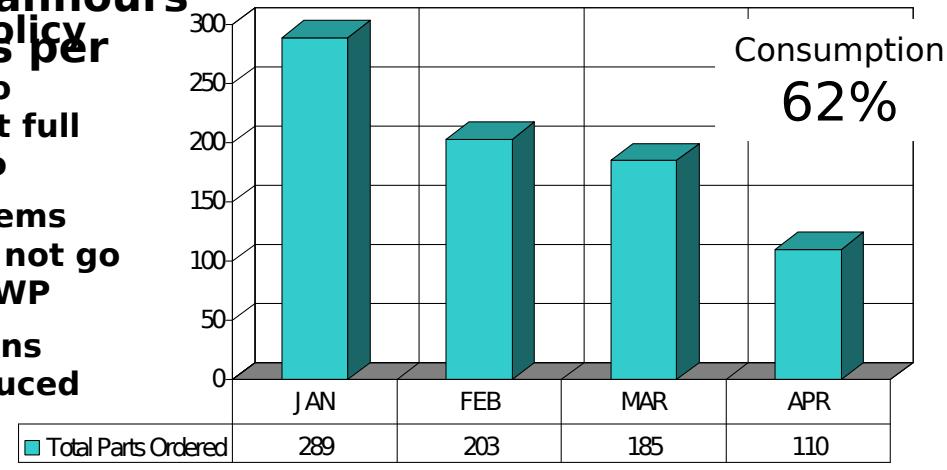
## Current TOC Accomplishments

600 Division

### W/C 640, ATC Prince

- Integrated Lean, Six Sigma and TOC tools
- Decrease in Awaiting Parts 15%
- Decrease in parts ordered 35%
- Decrease in Pool Critical items 42%
- Reduced required manhours from 144 to 80 hours per week
  - Implemented “No Cann” Policy
  - Cannibalizations driven to ensure Suppo’s shelf kept full and manage to DIFM Zero
  - Analysis: 74 percent of items that had been cann'd did not go RFI after coming out of AWP
  - Conclusion: Reducing cans reduces maintenance induced failures
  - RFT not impacted

- \$2,000,000 reduction in spending during first 4 months of CY04
- 110% surge in May over the last 4 months average



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# Current API Accomplishments

## W/C 65H, AEC Blair

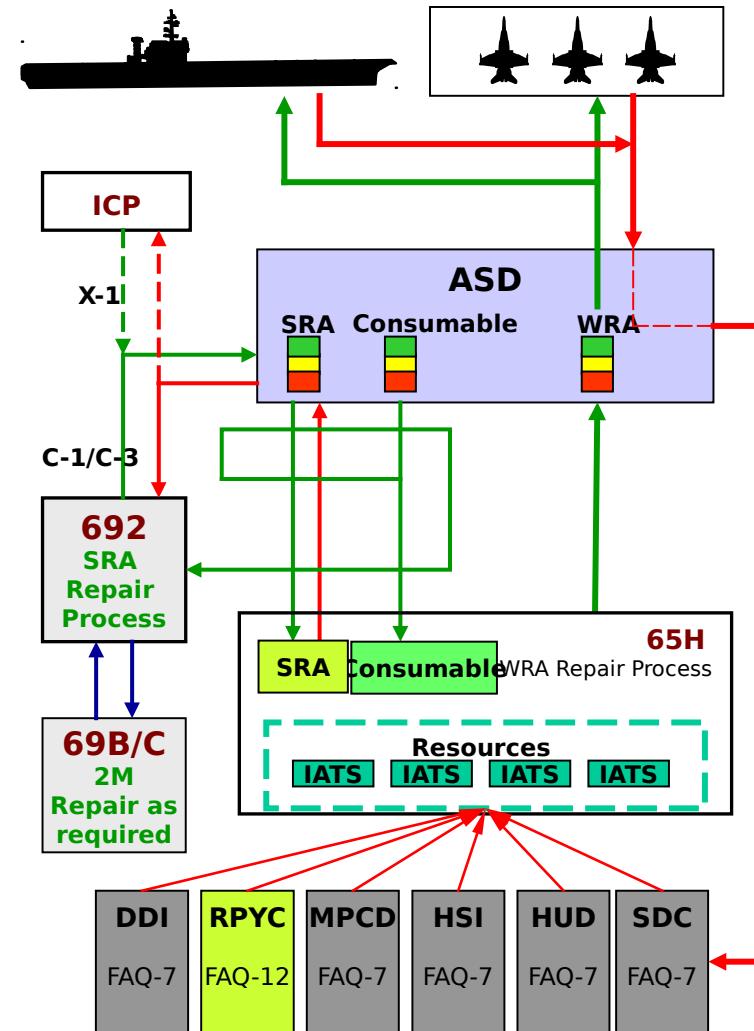
### 600 Division

- RPYC is No. 4 of six of the components in the top 10 WRA'S of the AIMD Index (No. 2 on the Kelly Index)**

- RPYC and 49 other WRA's compete for bench time on IATS
- Currently experiencing 25% A799 rate
- A799 RPYC's consume more than 1,300 hrs annually on IATS; significantly impacts IATS bench availability

- Opportunities:**

- Reduced A799 rate would put AIMD closer to meeting flightline consumption with current allowance of 12 RPYC's
- Implemented walk-thru test and check option to help reduce false demand induced at the ASD



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- Reduced Engine TAT from 83 days to 12 days
- PRC/URT Repair time decreased from 90 to 30 minutes
- Radar shop improved TAT from 14 days to 2 days
- SE improved Training and Licensing process from over 2 hours to less than 15 minutes
- Ordnance Division eliminated BRUs being turned in before 210 day inspection. (Quality built in)
- Paraloft - first division to add “defect” elimination to their processes
- “O” level FLIR pod team incorporated into the “I” level FLIR work center

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- Eliminated 30 Bare Firewalls (BFWs) and now have 22 spares for the F-404
- Decreased F-404 Rail usage from 18 to 6
- Reduced F-404 TAT from 78 to 27 days while maintaining a 15% increase in module builds
- Reduced F-18 hydraulic actuator cycle time by 47%
- BRU-32 inductions for unscheduled maintenance decreased from 80% to 40% due to much improved build quality

We have the opportunity to positively impact the business of Naval Aviation through the proper application of *AIRSpeed*.

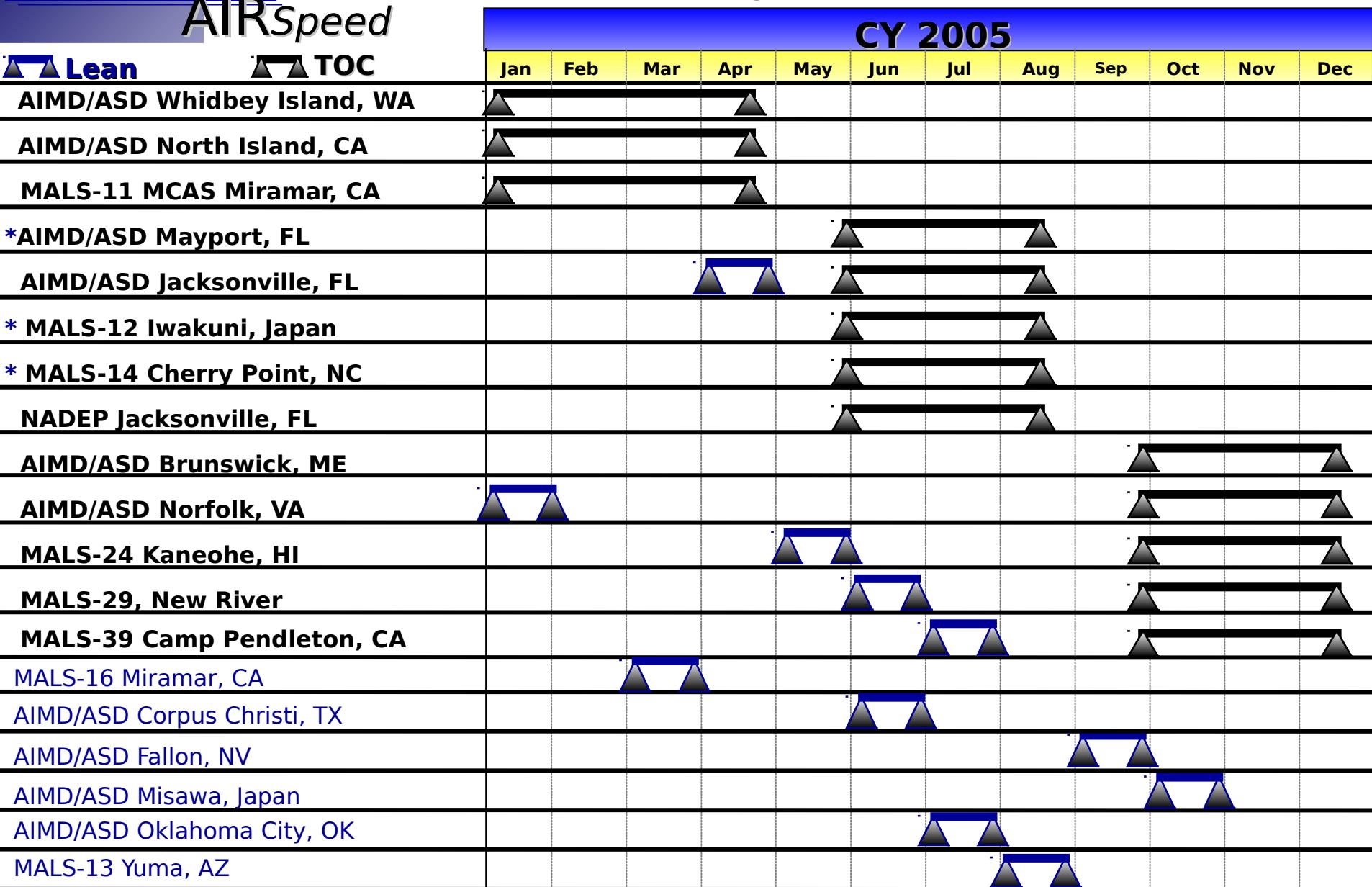


# Enterprise

## AIRSpeed



# Deployment Schedule



\*Lean Completed in CY04

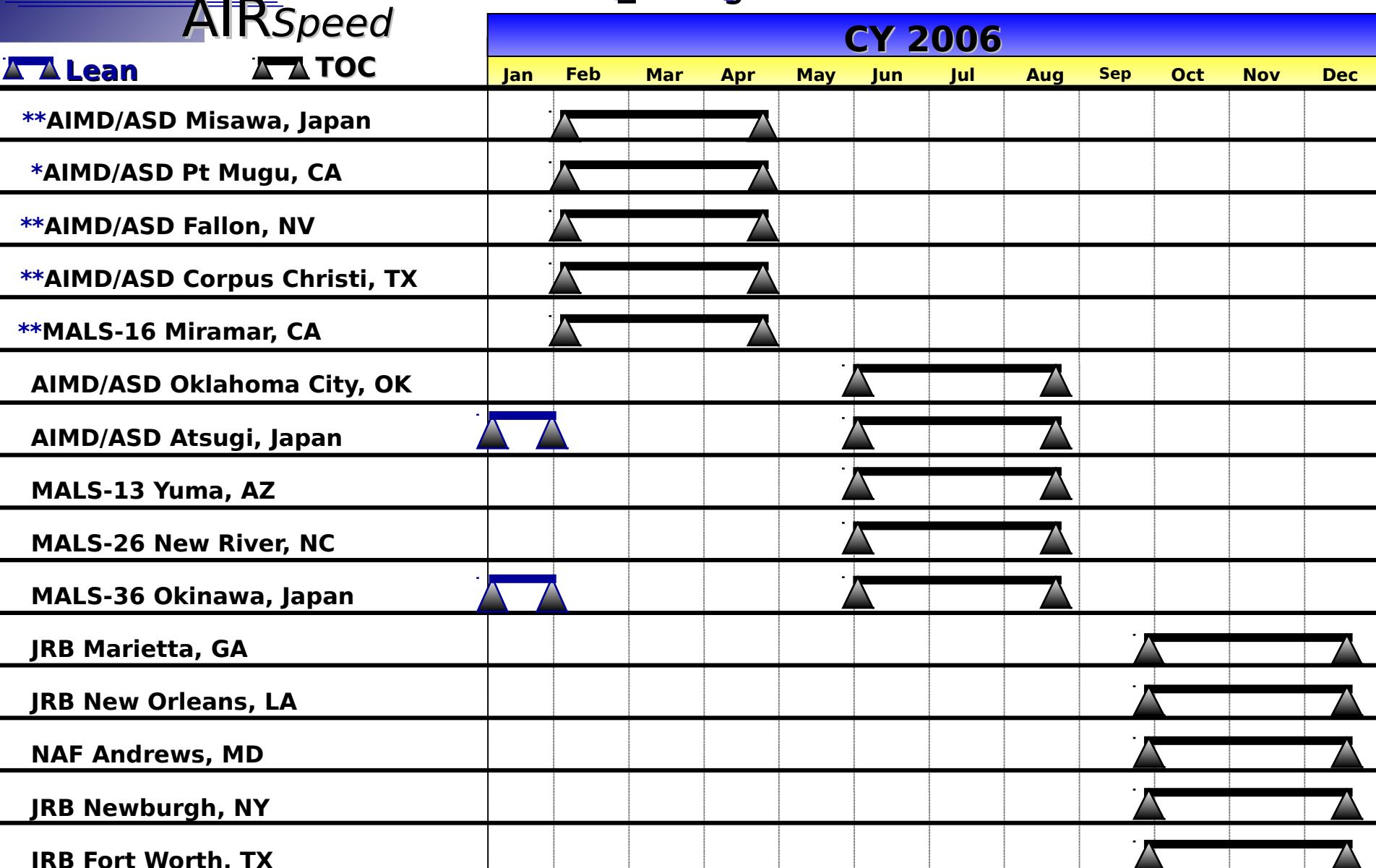
# Enterprise

## AIRSpeed



# Deployment Schedule

**CY 2006**



\*Lean Completed in CY04

\*\*Lean Completed in CY05